

# **PARACHUTE RIGGER KNOWLEDGE TEST GUIDE**

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## **PREFACE**

The Flight Standards Service of the Federal Aviation Administration (FAA) has developed this guide to help applicants meet the knowledge requirements for parachute rigger certification.

This guide contains information about eligibility requirements, test descriptions, testing and retesting procedures, and sample test questions representative of those used in the official tests. Sample test questions and choices of answers are based on regulations, principles, and practices valid at the time this guide was printed. In addition, appendix 1 provides a list of reference materials and subject matter knowledge codes, supplemental study reference materials, and computer testing designees. The list of subject matter knowledge codes should be referred to when reviewing areas of deficiency on the airman test report. Changes to the subject matter knowledge code list will be published as a separate advisory circular.

The parachute rigger test question bank and subject matter knowledge code list for all airmen certificates and ratings, with changes, may be obtained by computer modem from FedWorld at (703) 321-3339. This bulletin board service is provided by the U.S. Department of Commerce, 24 hours a day, 7 days per week. For technical assistance regarding computer software and modem requirements for this service, contact the FedWorld help desk at (703) 487-4608 from 7:30 a.m. to 5 p.m. EST, Monday through Friday.

This publication may be purchased from the Superintendent of Documents, U. S. Government Printing Office, Washington, DC 20402-9325 or from U.S. Government Printing Office bookstores located in major cities throughout the United States.

Comments regarding this guide should be sent to:

Federal Aviation Administration  
Operations Support Branch, AFS-630  
ATTN: Parachute Rigger Certification Manager  
P. O. Box 25082  
Oklahoma City, OK 73125

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# **PARACHUTE RIGGER KNOWLEDGE TEST GUIDE**

## **INTRODUCTION**

The FAA has available hundreds of computer testing centers nationwide. These testing centers offer the full range of airman knowledge tests including parachute rigger. Refer to appendix 1 in this guide for a list of computer testing designees.

This knowledge test guide was developed to be used by applicants preparing to take a knowledge test for the following certificates and ratings:

Parachute Rigger—Senior (RIG)  
Parachute Rigger—Master (RMP)  
Parachute Rigger—Military Competence (RMC)

As parachuting has grown over the last 20 years, so has the need for skilled riggers. The introduction of the ram-air canopy gave the sport a parachute that is highly maneuverable and capable of gentle landings. This advancement of parachute technology opened the sport to many persons who would not have considered it a few years ago. As a result of the rapid expansion of parachute technology, today's riggers are faced with an ever expanding variety of equipment, materials, and rigging requirements. The ram-air canopy, being more complex than the simple round canopy of a few years ago, requires different packing and repair methods, making it essential that today's rigger possess a high degree of knowledge and skill.

This guide is not offered as a quick and easy way to obtain the necessary information for passing the knowledge tests. There is no quick and easy way to obtain the background of experience, knowledge, and skill needed to become a certificated parachute rigger. Rather, the intent of this guide is to define and narrow the field of study, as much as possible, to the required knowledge areas for obtaining a senior or master parachute rigger certificate.

## **ELIGIBILITY REQUIREMENTS**

The general qualifications for a senior or master parachute rigger's certificate require that the applicant have a combination of experience, knowledge, and skill.

An applicant for a senior, master, or military competence knowledge test should carefully review the appropriate sections of Federal Aviation Regulations (FAR) Part 65, Subpart A and Subpart F for detailed information pertaining to this subject.

## **KNOWLEDGE AREAS ON THE TESTS**

The tests are comprehensive because they must test an applicant's knowledge in many subject areas. An applicant for a senior parachute rigger certificate should review FAR Section 65.115 for the knowledge areas on the test. An applicant for a military competence senior parachute rigger certificate should review FAR Section 65.117 for the knowledge areas on the test. An applicant for a master parachute rigger certificate should review FAR Section 65.119 for the knowledge areas on the test.

## DESCRIPTION OF THE TESTS

The maximum time allowed for taking each test is 2 hours for either the senior or master certificate and 1 hour for the military competence test. The allotted time is based on previous experience and educational statistics. This amount of time is considered more than adequate for applicants with proper preparation and instruction.

The following tests each contain 50 questions:

Parachute Rigger—Senior (RIG)  
Parachute Rigger—Master (RMP)

The following test contains 25 questions:

Parachute Rigger—Military Competence (RMC)

Communication between individuals through the use of words is a complicated process. In addition to being an exercise in the application and use of aeronautical knowledge, a test is also an exercise in communication since it involves the use of the written language. Since the tests involve written rather than spoken words, communication between the test writer and the person being tested may become a difficult matter if care is not exercised by both parties. Consequently, considerable effort is expended to write each question in a clear, precise manner. Applicants should carefully read the information and instructions given with the tests, as well as the statements in each test item.

When taking a test, keep the following points in mind:

1. Answer each question in accordance with the latest regulations and procedures.
2. Read each question carefully before looking at the possible answers. You should clearly understand the problem before attempting to solve it.
3. After formulating an answer, determine which of the alternatives most nearly corresponds with that answer. The answer chosen should completely resolve the problem.
4. From the answers given, it may appear that there is more than one possible answer. However, there is only one answer that is correct and complete. The other answers are either incomplete or are derived from popular misconceptions.
5. If a certain question is difficult for you, it is best to mark it for **RECALL** and proceed to the other questions. After you answer the less difficult questions, return to those which you marked for recall and answer them. The recall procedure will be explained to you prior to starting the test. Leave no question without an answer being recorded for it when you are finished. The computer will alert you to all unanswered questions. This procedure will enable you to use the available time to the maximum advantage.
6. When solving a calculation problem, select the answer nearest your solution. The problem has been checked with various types of calculators; therefore, if you have solved it correctly, your answer will be closer to the correct answer than any of the other choices.

## **TAKING A KNOWLEDGE TEST BY COMPUTER**

An applicant for a parachute rigger's certificate, testing for the first time, must present to the computer testing center a properly completed FAA Form 8060-7, Airman's Authorization for Written Test, signed by an Airworthiness Aviation Safety Inspector. This form is obtained at an FAA Flight Standards District Office or International Field Office. The applicant must also provide a permanent mailing address and positive proof of identification. The identification presented must include a current photograph of the applicant, the applicant's signature, and the applicant's actual residential address, if different from the mailing address. This information may be presented in more than one form of identification.

Acceptable forms of identification include, but are not limited to, driver's licenses, government identification cards, passports, alien residency (green) cards, and military identification cards. Other forms of identification that meet the requirements of this paragraph are acceptable. Some applicants may not possess the identification documentation described. In the case of an applicant under age 21, the applicant's parent or guardian may have to accompany the applicant and present an identification of themselves as described previously. The parent or guardian may then attest to the applicant's identity.

In any case, you should always check with your instructor or your local Flight Standards District Office if you are unsure of what kind of authorization to bring to the testing facility.

The next step is the actual registration process. Most computer testing centers require that all applicants contact a central 1-800 phone number. At this time, you should select a testing center, schedule a test date, and make financial arrangements for test payment.

Applicants may register for tests several weeks in advance of the proposed testing date. You may cancel your appointment up to 2 business days before test time, without financial penalty. After that time, you may be subject to a cancellation fee as determined by the testing center.

You are now prepared to take the test. Remember, you always have an opportunity to take a sample test before your actual test begins. Your actual test is under a time limit, but if you know your material, there should be sufficient time to complete and review your test. Within moments of completing the test, you will receive an airman test report, which contains your score. It also lists those subject matter knowledge areas where questions were answered incorrectly. **The total number of subject matter knowledge codes shown on the airman test report is not necessarily an indication of the total number of questions answered incorrectly.**

These codes refer to a list of knowledge areas that can be found in appendix 1 of this guide. You can study these knowledge areas to improve your understanding of the subject matter. The examiner may quiz you on the areas of deficiency during the practical test.

The airman test report, which must show the computer testing company's embossed seal, is an important document. **DO NOT LOSE THE AIRMAN TEST REPORT** as you will need to present it to the examiner prior to taking a practical test. Loss of this report means that you will have to request a duplicate from the FAA in Oklahoma City. This will be costly and time consuming.

## **CHEATING OR OTHER UNAUTHORIZED CONDUCT**

Computer testing centers follow rigid testing procedures established by the FAA. This includes test security. When entering the actual testing area, you are permitted to take only scratch paper furnished by the test administrator and authorized aviation computers, plotters, etc. that are approved for use in accordance with FAA Order 8080.6, Conduct of Airmen Knowledge Testing via the Computer Medium, and AC 60-11, Aids Authorized for use by Airman Written Test Applicants. The FAA has directed testing centers to stop a test any time a test administrator suspects a cheating incident has occurred. An FAA investigation will then follow. If the investigation determines that cheating or other unauthorized conduct has occurred, any airman certificate that you hold may be revoked, and you may not be allowed to take a test for 1 year.

## **RETESTING PROCEDURES**

If the score on the airman test report is 70 or above, the test is passed. You may elect to retake the test, in anticipation of a better score, after 30 days from the date your last test was taken. Prior to retesting, you must give your current airman test report to the computer testing administrator. Remember, the score of the **latest** test you take will become your official test score. The FAA will not consider allowing anyone to retake a valid test before the 30-day remedial study period.

A person who fails a knowledge test may apply for retesting before 30 days of the last test providing that person presents the failed test report and an endorsement from an airman holding the certificate and rating(s) sought by the applicant. The endorsement must state that additional instruction has been given, and the airman finds the person competent to pass the test. A person may retake a failed test after 30 days without an endorsement.

## SAMPLE TEST QUESTIONS AND ANSWERS

The questions in this section are similar to some of those contained in FAA knowledge tests for parachute riggers. The subjects covered here represent only a sampling of the subjects covered on the actual test.

### Parachute Rigger—Senior (RIG)

**1. When operating a sewing machine, which of the following can occur if the pressure foot has too much pressure on it?**

- A—Stitches will break.
- B—Fabric may pucker.
- C—Staggered stitches.

*Answer B—Subject Matter Code: P33. Fabric may pucker. The Parachute Manual, by Poynter Publishing Volume I, Third Edition, Chapter III, Section 3.706, states, “Too much pressure makes the machine run hard and the feed dog may leave marks in the material; canopy fabric may pucker.”*

**2. Why is clear plastic tubing placed around the Rapide links and hand tacked in place on some main risers of ram-air canopies?**

- A—To protect the suspension line lower finger trap loops.
- B—To protect the canopy slider grommets.
- C—To prevent barrel nut from working loose.

*Answer B—Subject Matter Code: P34. To protect the canopy slider grommets. The Parachute Manual, by Poynter Publishing Volume II, Chapter Four, Section 4.155, states, “Slider bumpers are clear plastic tubing placed over the Rapide links on the main rises to protect the grommets in the canopy slider from damage.”*

### Parachute Rigger—Master (RMP)

**3. Which component of a single harness dual pack assemble may an appropriately rated master rigger alter without approval?**

- A—Harness.
- B—Reserve canopy
- C—Main canopy pilot chute.

*Answer C—Subject Matter Code: A44. Main canopy pilot chute. FAR Section 65.125(c) states, “A certificated parachute rigger need not comply with 65.127 through 65.133 (relating to facilities, equipment, performance standards, records, recent experience, and seal) in packing, maintaining, or altering (if authorized) the main parachute of a dual parachute pack to be used for intentional jumping.”*

**4. Which of the following repairs require a master parachute rigger certificate to accomplish?**

- A—Replace grommets in the slider of the main canopy.
- B—Splice control line on certificated canopy.
- C—Restitch container seam on main parachute assembly.

*Answer B—Subject Matter Code: P57. Splice control line on certificated canopy. The Parachute Manual, by Poynter Publishing Volume II, Chapter Seven, Section 7.24, states, “C. Repair Personnel: Non-certificated canopy: Senior or Master Parachute Rigger. Certificated canopy: Master Parachute Rigger.”*

**Parachute Rigger—Military Competence (RMC)**

**5. When a certificated Senior parachute rigger packs the main parachute of a dual parachute pack that is to be used for intentional jumping, the rule states, the rigger**

- A—shall pack the parachute only at his or her facility.
- B—may pack the parachute at locations other than his or her facility.
- C—shall seal the parachute with an identifying mark prescribed by the administrator.

*Answer B—Subject Matter Code: A44. The rigger may pack the parachute at locations other than his or her facility. FAR Section 65.125(c) states, “A certificated parachute rigger need not comply with 65.127 through 65.133 (relating to facilities, equipment, performance standards, records, recent experience, and seal) in packing, maintaining, or altering (if authorized) the main parachute of a dual parachute pack to be used for intentional jumping.”*

**6. What Federal Aviation Regulation (FAR) prescribes rules governing parachute jumping?**

- A—FAR Part 105.
- B—FAR Part 103.
- C—FAR Part 65.

*Answer A—Subject Matter Code: L90. FAR Part 105 - PARACHUTE JUMPING.*

# APPENDIX 1

## **LIST OF REFERENCE MATERIALS AND SUBJECT MATTER KNOWLEDGE CODES**

The publications listed in the following pages contain study material you need to be familiar with when preparing for the parachute rigger knowledge tests. All of these publications can be purchased through U.S. Government bookstores, commercial aviation supply houses, or industry organizations. The latest revision of the listed references should be requested. Additional study material is also available through these sources that may be helpful in preparing for the parachute rigger knowledge tests.

The subject matter knowledge codes establish the specific reference for the knowledge standard. When reviewing results of your knowledge test, you should compare the subject matter knowledge code(s) on your airman test report to the ones found below. This will be helpful for both review and preparation for the practical test.

### **FAR 1 Definitions and Abbreviations**

- A01 General Definitions
- A02 Abbreviations and Symbols

### **FAR 39 Airworthiness Directives**

- A13 General
- A14 Airworthiness Directives

### **FAR 65 Certification: Airmen Other Than Flight Crewmembers**

- A40 General
- A44 Parachute Riggers

### **FAR 91 General Operating and Flight Rules**

- B12 Special Flight Operations

### **FAR 105 Parachute Jumping**

- C01 General
- C02 Operating Rules
- C03 Parachute Equipment

### **FAR 183 Representatives of the Administrator**

- E20 General
- E20.2 Kinds of Designations: Privileges

### **ADDITIONAL ADVISORY CIRCULARS**

- K45 AC 39-7, Airworthiness Directives
- L90 AC 105-2, Sport Parachute Jumping

### **The Parachute Manual, Para Publishing**

- P31 Regulations
- P32 The Parachute Rigger Certificate
- P33 The Parachute Loft
- P34 Parachute Materials
- P35 Personnel Parachute Assemblies
- P36 Parachute Component Parts
- P37 Maintenance, Alteration, and Manufacturing Procedures
- P38 Design and Construction
- P39 Parachute Inspecting and Packing
- P40 Glossary/Index

### **The Parachute Manual, Vol. II, Para Publishing**

- P51 Parachute Regulations
- P52 The Parachute Rigger's Certificate
- P53 The Parachute Loft
- P54 Parachute Materials
- P55 Personnel Parachute Assemblies
- P56 Parachute Component Parts
- P57 Maintenance, Alteration, and Manufacturing
- P58 Parachute Design and Construction
- P59 Parachute Inspection and Packing

### **Technical Standard Orders**

- Y60 TSO-C23b, Parachute
- Y61 TSO-C23c, Personnel Parachute Assemblies
- Y62 TSO-C23d, Personnel Parachute Assemblies

**NOTE:** AC 00-2, Advisory Circular Checklist, transmits the status of all FAA advisory circulars (AC's), as well as FAA internal publications and miscellaneous flight information such as Airman's Information Manual, Airport/Facility Directory, knowledge test guides, practical test standards, and other material directly related to a certificate or rating. To obtain a free copy of AC 00-2, send your request to:

U.S. Department of Transportation  
General Services Section, M-45.3  
Washington, DC 20590

## **SUPPLEMENTAL STUDY REFERENCE MATERIALS**

Parachuting, The Skydiver's Handbook, Poynter, Para Publishing

Parachute Riggering Course, Poynter, Para Publishing

The Rigger's Sourcebook, Blackmon

Sky Diving, Beckman, Sterling Publishing Company

Packing the Personnel Back (HALO) Parachute, ST 10-501-22, U.S. Army

Organizational and DS Maintenance Manual including Repair Parts and Special Tools for MC-3 Free-Fall Parachute System, TM 10-1670-264-13&P, Department of the Army, and Air Force

Aviation - Crew Systems Parachutes, NAVAIR 13-1-6.2 Department of the Navy

Parachute Owner's Manuals by various manufacturers

## COMPUTER TESTING DESIGNEES

The following is a list of the computer testing designees authorized to give FAA knowledge tests. This list should be helpful in choosing where to register for a test or for requesting additional information.

Aviation Business Services  
1-800-947-4228  
outside U.S. (415) 259-8550

Drake Prometric  
1-800-359-3278  
outside U.S. (612) 896-7702

Sylvan Learning Systems, Inc.  
1-800-967-1100  
outside U.S. (410) 880-0880, Extension 8890

The latest listing of computer testing center locations may be obtained through FedWorld, (703) 321-3339, in the FAA library file named TST\_SITE. For technical assistance, contact the FedWorld help desk at (703) 487-4608.